Creating Web Based Applications
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Introduction

This presentation is designed to demonstrate the use of Multi Dimensional Databases in SAS Software and their use in a business environment. We will demonstrate their creation to enablement in a webEIS application. This presentation is designed for intermediate to advanced SAS users with some background in web decision support.

First, we need to create a libref to access our data. We’ll issue code similar to the following. A SAS data set called BP1 will be located in this location.

Now, we’ll start EIS software.

Select Metabase.

This will prompt us for a location to store our metadata. This is information about the actual data we will publish. The original data can be in detail form.

The repository will be SASUSER for this demonstration. Select Add.

We will add the libref SAVED that we just defined to this metabase repository.

Highlight the Table listed to see the potential attributes currently assigned.
Click the **Colors** button to assign various attributes to particular columns in the data.

Once a column is highlighted, click **Add** to add the Analysis attribute to this variable.

Click **OK** when finished.

Select the type of statistics desired.

Click **OK** when finished.

Select the appropriate statistics and click **OK**.
We will now add a Hierarchy to our data. This will allow some drilldown selection when the data is presented. Click the right hand button.

Select

and click OK

Now, we'll go through a process to define several variables to a hierarchy and then save the hierarchy with a name.

Type the name of the drilldown hierarchy and assign variables to it in the desired order.

Click Close when you have completed your selection for this hierarchy. You will see it appear at the top of the screen.

Click OK when finished and you'll see a hierarchy defined in the metadata.

Click Close to close the metabase window.

Now we must build an MDBB. We'll do this through the prompting capabilities offered with SAS/EIS software. Otherwise, PROC MDBB could be used to perform similar tasks.

Select Build EIS.

We will use the default EIS Application location. Notice it is currently empty.
Click **Add** to create an MDDB.

Select **Build** to take you to the following window.

Select the first button **Build**

Choose a location and name for the MDDB>

Select **OK** when finished.

Select the second button **Select** to see the following screen.

It is important to choose a predefined data set at this point.

Select **OK** when finished.

For the Dimension, select the button **Select**

Select **Add** to choose
Choose the appropriate dimensions desired.

Choose the appropriate analysis desired.

Select OK when finished.

Choose to select the order of column data. Here, we will select everything in ascending order.

We will choose desired statistics.

Click OK when finished.

The prestored hierarchy of the MDDB can be selected with the Advanced... button.

We will select Populate to choose. This stores all possible hierarchies available. This works well for the fastest access speed during use. This also works well because the data we are using is very small. Results of MDDB size will vary with more hierarchies. It is a good idea to keep the MDDB structure to a minimal number of hierarchies.

Click OK when finished.
Click [Create] to actually create the MDDB. The following message will be displayed when processing is finished.

![SAS MDDB creation dialog]

First, we need to check our connections to make sure we have access to all of the data needed. Select Tools, Appdev Studio Connections.

Click [OK] and [Close] to end out of this.

Under the Appdev Studio menuing selection, load the Spawner. This is used for development purposes.

![Spawner menu]

Now load webEIS from the Appdev Studio menu to see the following screen.

![webEIS screenshot]

Modify it to add the appropriate libname statement in the Initial Submit section and then click [OK] when done.
Now, create a new document and section. Select File, New

Select the MDDB file created earlier.

and click OK.

Select your PC

Click OK and the following screen is displayed.

Place a title on the webEIS document by clicking on the abc button. Draw out the area for the title.

All of the tables available will be listed.
Right click on the Text box and select Customize.

Select the MDDB button and draw out the location for the MDDB to be displayed.

Drag and drop the desired statistics in the left hand display onto the word Measures.

Change the title to what is appropriate and click OK.
View it in Preview Mode by selecting the View pulldown and ...

A right click displays the following menu.

When you are ready to package it, select Tools.

The following menu will appear. We strongly suggest you select Complete to use SASNetCopy. This bundles everything needed for long term use and speed of web based MDDB access. Click Next and following the menus, making sure the items are selected as we have them here.

When you click Finish, prompts similar to the following will appear.
You will find all of the documents needed in the following location.

They must all be moved to the web server. Load the HTML file and the MDDB will appear.